

I claim:

1. A tooth-bleaching composition for contacting a tooth surface in a subject, the composition comprising:
  - a first formulation having a hydrogen peroxide-containing compound; and
  - 5 a separate second formulation having a thickening agent, a pH adjusting agent, and less than 0.5% by weight, based on the weight of the composition, of a calcium chelating agent;wherein the first and second formulations remain separate and are mixed with one another, prior to use, to form the composition.
- 10 2. A tooth-bleaching composition according to claim 1, wherein the hydrogen peroxide-containing compound is a percarbonate salt.
- 15 3. A tooth-bleaching composition according to claim 2, wherein the percarbonate salt is selected from the group consisting of sodium and potassium percarbonate.
- 20 4. A tooth-bleaching composition according to claim 1, wherein the hydrogen peroxide-containing compound is hydrogen peroxide.
- 25 5. A tooth-bleaching composition according to claim 4, wherein the concentration of hydrogen peroxide in the composition is less than 15% by weight of the composition.
6. A tooth-bleaching composition according to claim 1, wherein the composition has a pH in a range of from about 6.0 to about 10.0.
7. A tooth-bleaching composition according to claim 6, wherein the

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composition has a pH in a range of from about 8.0 to about 9.5.

8. A tooth-bleaching composition according to claim 1, wherein the calcium chelating agent is selected from the group consisting of EDTA and its salts, 5 citric acid and its salts, gluconic acid and its salts, alkali metal pyrophosphates and alkali metal polyphosphates.

9. A tooth-bleaching composition according to claim 8, wherein the calcium chelating agent further acts as a stabilizing agent for the peroxide-10 containing compound.

10. A tooth-bleaching composition according to claim 1, wherein wherein the calcium chelating agent is 1-hydroxyethylidene-1,1-diphosphonic acid.

15 11. A tooth-bleaching composition according to claim 1, wherein the composition is capable of a detectable tooth-bleaching effect within 30 minutes.

12. A tooth-bleaching composition according to claim 1, wherein each of the first and second formulations are formulated for storage within a chamber of a 20 multi-chamber vessel, such that in the presence of an externally applied pressure, each of the formulations is forced to exit its respective chamber through a mixing baffle to form the composition.